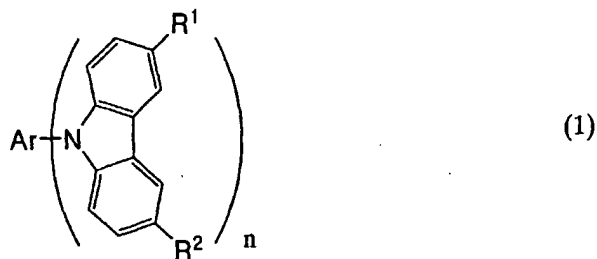


## CLAIMS

1. A composite material comprising an organic compound represented in the general formula (1), and an inorganic compound;

5

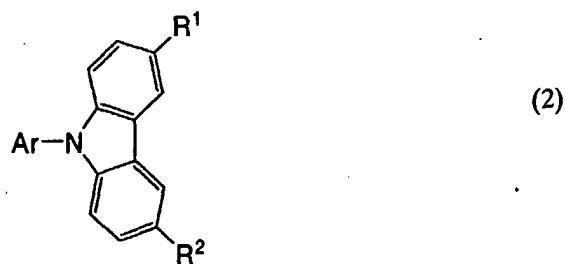


wherein Ar represents an aromatic series hydrocarbon group having 6 to 42 carbon atoms; n represents a natural number from 1 to 3; and R<sup>1</sup> and R<sup>2</sup> represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

10

2. A composite material comprising an organic compound represented in the general formula (2), and an inorganic compound,

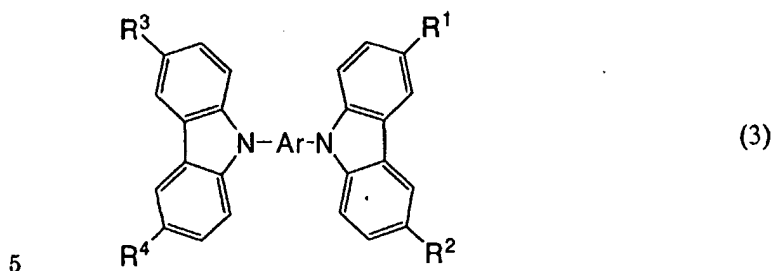
15



wherein Ar represents a monovalent aromatic series hydrocarbon group having 6 to 42 carbon atoms; and R<sup>1</sup> and R<sup>2</sup> represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

20

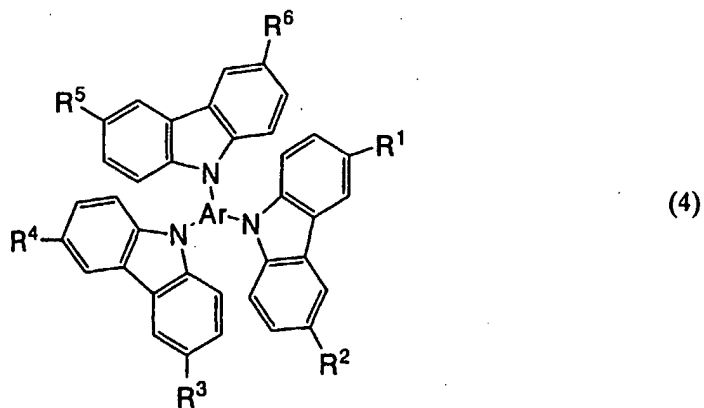
3. A composite material comprising an organic compound represented in the general formula (3), and an inorganic compound,



wherein Ar represents a divalent aromatic series hydrocarbon group having 6 to 42 carbon atoms; and  $R^1$  to  $R^4$  represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

10

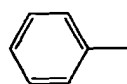
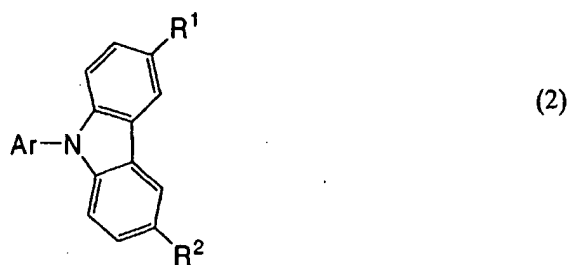
4. A composite material comprising an organic compound represented in the general formula (4), and an inorganic compound,



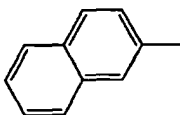
15

wherein Ar represents a trivalent aromatic series hydrocarbon group having 6 to 42 carbon atoms; and  $R^1$  to  $R^6$  represent hydrogen, or an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

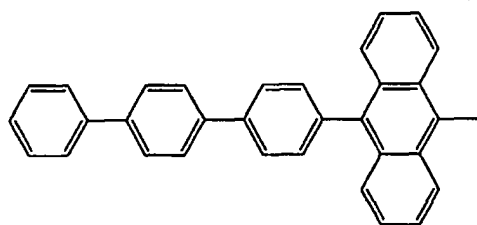
5. A composite material according to claim 2, wherein Ar represents any of the aromatic series hydrocarbon groups represented in the structural formulas (2-1) to (2-3),



(2-1)



(2-2)

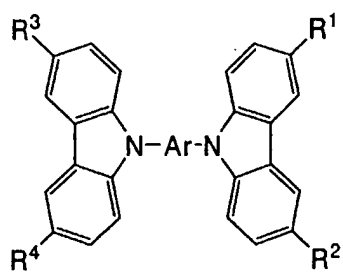


(2-3)

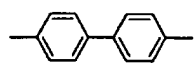
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6. A composite material according to claim 3, wherein Ar represents any of the aromatic series hydrocarbon groups represented in the structural formulas (3-1) to (3-10),

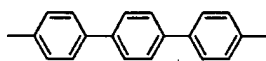
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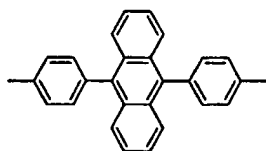
(3)



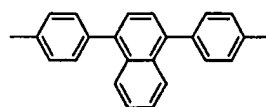
(3-1)



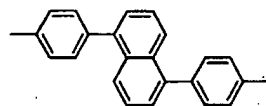
(3-2)



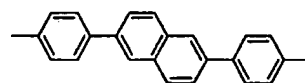
(3-3)



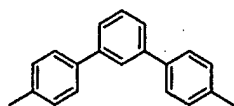
(3-4)



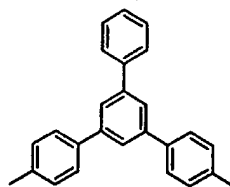
(3-5)



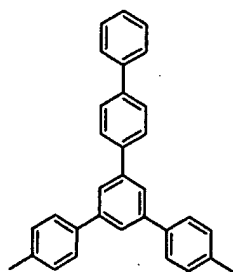
(3-6)



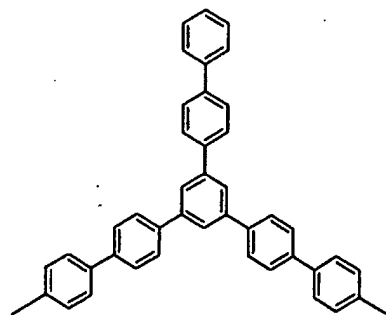
(3-7)



(3-8)

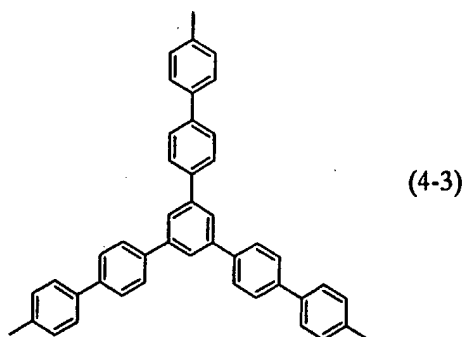
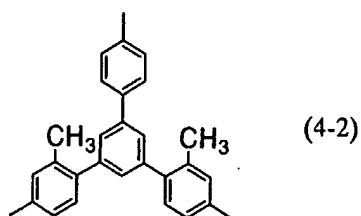
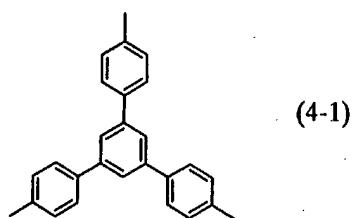
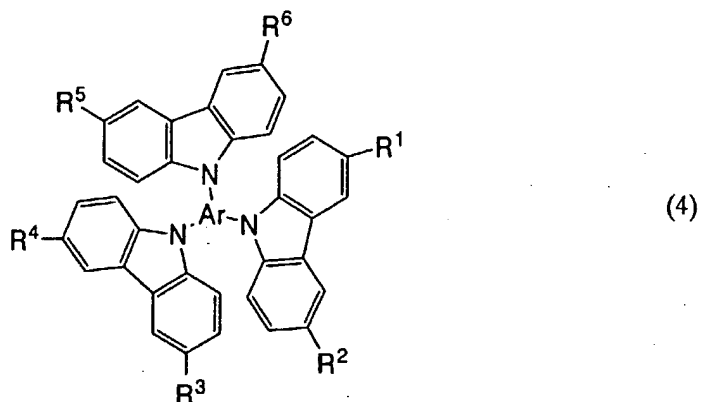


(3-9)



(3-10)

7. A composite material according to claim 4, wherein Ar represents any of the aromatic series hydrocarbon groups represented in the structural formulas (4-1) to (4-3),



5

8. A composite material comprising an aryl carbazole and an inorganic compound.

10

9. A composite material comprising an aryl carbazole which does not have an

arylamine skeleton, and an inorganic compound.

10. A composite material according to any one of claims 1 to 4, 8 and 9, wherein the inorganic compound is an oxide of a transition metal.

5

11. A composite material according to any one of claims 1 to 4, 8 and 9, wherein the inorganic compound is an oxide of a metal belonging to groups 4 to 8 of the periodic table.

10

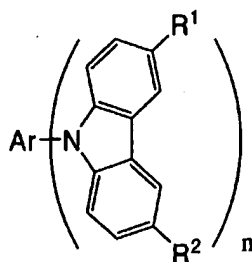
12. A composite material according to any one of claims 1 to 4, 8 and 9, wherein the inorganic compound is any of vanadium oxide, tantalum oxide, molybdenum oxide, tungsten oxide, rhenium oxide, and ruthenium oxide.

13. A light emitting element comprising between a first electrode and a second electrode:

15

a layer including an organic compound represented in the general formula (1) and an inorganic compound; and

a layer including a light emitting substance,



20

(1)

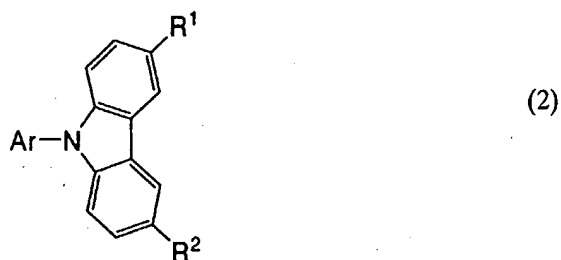
wherein Ar represents an aromatic series hydrocarbon group having 6 to 42 carbon atoms; n represents a natural number from 1 to 3; and R<sup>1</sup> and R<sup>2</sup> represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

25

14. A light emitting element comprising between a first electrode and a second electrode:

a layer including an organic compound represented in the general formula (2), and an inorganic compound; and

5 a layer including a light emitting substance,

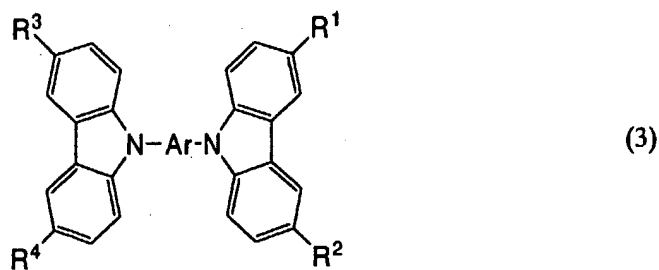


wherein Ar represents a monovalent aromatic series hydrocarbon group having  
10 6 to 42 carbon atoms; and R<sup>1</sup> and R<sup>2</sup> represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

15. A light emitting element comprising between a first electrode and a second electrode:

15 a layer including an organic compound represented in the general formula (3), and an inorganic compound; and

a layer including a light emitting substance,

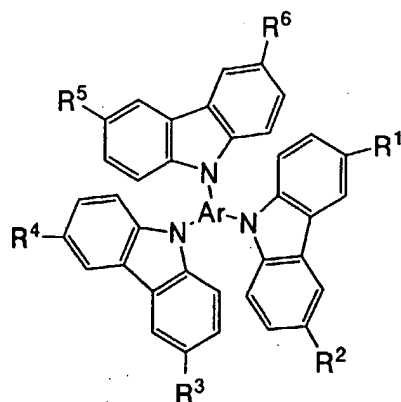


20 wherein Ar represents a divalent aromatic series hydrocarbon group having 6 to 42 carbon atoms; and R<sup>1</sup> to R<sup>4</sup> represent hydrogen, an alkyl group having 1 to 4 carbon

atoms, or an aryl group having 6 to 12 carbon atoms.

16. A light emitting element comprising between a first electrode and a second electrode:

- 5 a layer including an organic compound represented in the general formula (4),  
and an inorganic compound; and  
a layer including a light emitting substance,

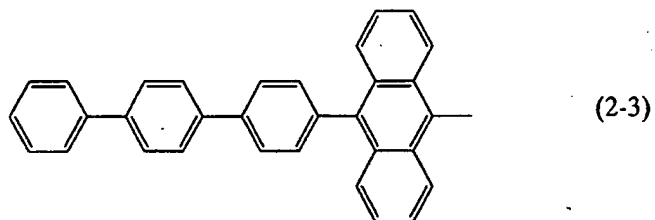
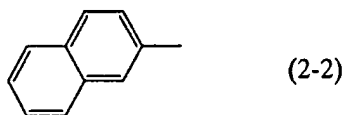
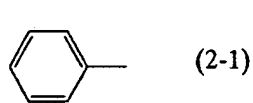
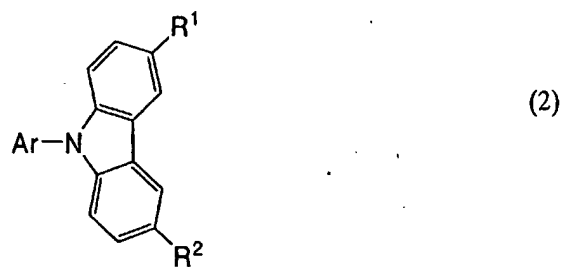


(4)

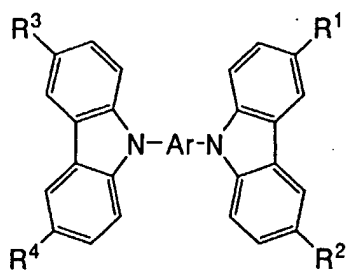
- 10 wherein Ar represents a trivalent aromatic series hydrocarbon group having 6 to 42 carbon atoms; and R<sup>1</sup> to R<sup>6</sup> represent hydrogen, an alkyl group having 1 to 4 carbon atoms, or an aryl group having 6 to 12 carbon atoms.

17. A light emitting element according to claim 14, wherein Ar represents one  
15 of the aromatic series hydrocarbon groups represented in the structural formulas (2-1) to (2-3),

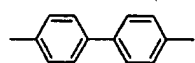




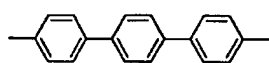
18. A light emitting element according to claim 15, wherein Ar represents one of the aromatic series hydrocarbon groups represented in the structural formulas (3-1) to
- 5 (3-10),



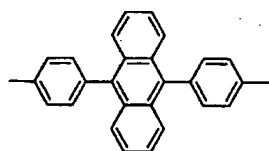
(3)



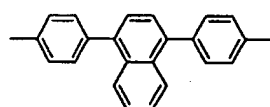
(3-1)



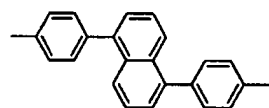
(3-2)



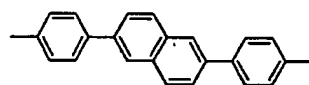
(3-3)



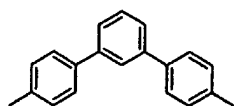
(3-4)



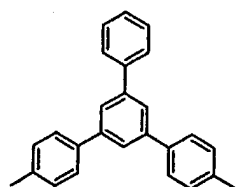
(3-5)



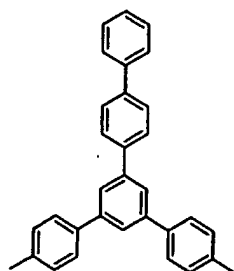
(3-6)



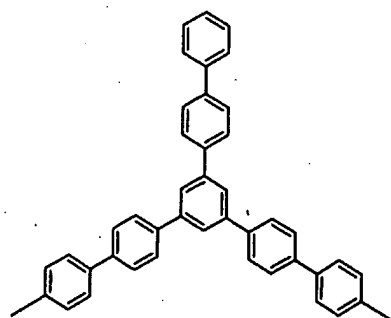
(3-7)



(3-8)

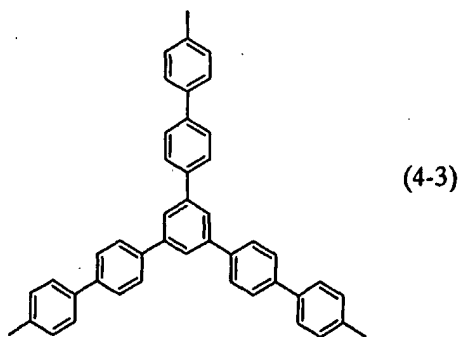
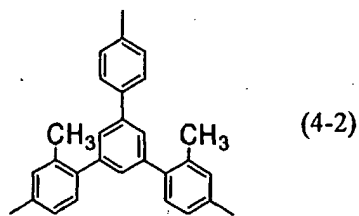
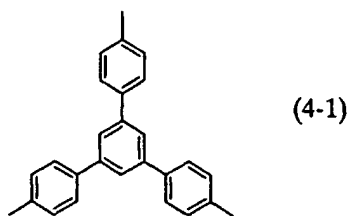
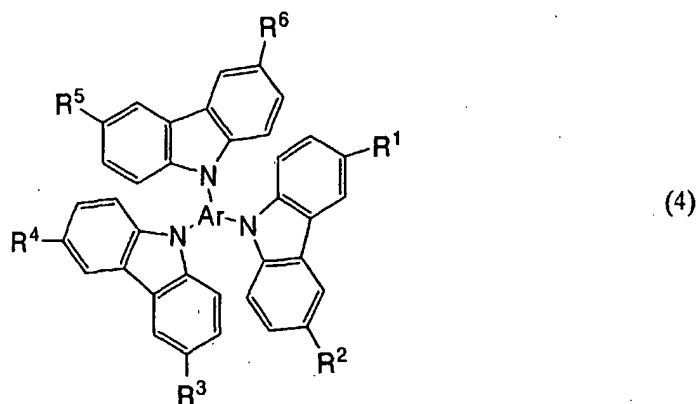


(3-9)



(3-10)

19. A light emitting element according to claim 16, wherein Ar represents one of the aromatic series hydrocarbon groups represented in the structural formulas (4-1) to (4-3),



5

20. A light emitting element comprising between a first electrode and a second electrode:

a layer including an aryl carbazole and an inorganic compound; and

a layer including a light emitting substance.

10

21. A light emitting element comprising between a first electrode and a second electrode:

- a layer including an aryl carbazole which does not have an arylamine skeleton,  
5 and an inorganic compound; and  
a layer including a light emitting substance.

22. A light emitting element according to any one of claims 13 to 16, 20 and 21, wherein the inorganic compound is an oxide of a transition metal.

10

23. A light emitting element according to any one of claims 13 to 16, 20 and 21, wherein the inorganic compound is an oxide of a metal belonging to groups 4 to 8 of the periodic table.

15

24. A light emitting element according to any one of claims 13 to 16, 20 and 21, wherein the inorganic compound is any of vanadium oxide, tantalum oxide, molybdenum oxide, tungsten oxide, rhenium oxide, and ruthenium oxide.

20

25. A light emitting device comprising:  
the light emitting element according to any one of claims 13 to 16, 20 and 21;  
and  
a means for controlling light emission of the light emitting element.

25

26. An electronic appliance comprising:  
a display portion, the display portion which includes the light emitting element according to any one of claims 13 to 16, 20 and 21; and  
a means for controlling light emission of the light emitting element.